

# London's Economy Today

Issue 193 | September 2018

## Significant uncertainty remains with six months to go to Brexit



By **Gordon Douglass**, Supervisory Economist and **Mike Hope**, Economist

**There are now six months left before the UK is due to leave the EU but as yet the final outcome of the Brexit negotiations remains unclear. It is however likely that the UK & EU will miss the previously set October deadline for a Brexit deal after the Government's Brexit plan based on their Chequers proposals was not accepted at the Salzburg EU leaders summit in September. In September it was also announced that Mark Carney, the Governor of the Bank of England, will now remain in post until January 2020. This is an extension of seven months and is in order to "support a smooth exit" from the EU according to Philip Hammond, the Chancellor of the Exchequer.**

Faced with an increased possibility of a no-deal Brexit a number of organisations have been issuing warnings of the impact of such a situation on the UK economy. Thus Christine Lagarde, the Managing Director of the IMF noted in her comments on the IMF's latest mission to the UK that it was important "to avoid a no-deal Brexit, which would impose very large costs on the UK economy. Indeed, leaving the EU without an agreement on the framework for the future economic relationship and an implementation period to get there is the most significant near-term risk to the UK economy". Philip Hammond,

### Also in this issue

UK inflation picks up but so does monthly economic growth.....	2
International trade tensions continue.....	3
London's ranking as a global financial centre falls to second place .....	4
Economic indicators .....	6
Performance of past employment projections .....	12
Our latest publications .....	16

### Datastore

The main economic indicators for London are available to download from the [London Datastore](#).

who was appearing beside Ms Lagarde, also noted that a no-deal Brexit “would put at risk the substantial progress the British people have made over the past 10 years in repairing our economy”. During September the Government has also continued to publish technical notices to provide guidance on preparing for a no-deal on a range of issues from driving to passports to mobile phone roaming charges.

Looking at the migration regime post Brexit the Migration Advisory Committee (MAC) published its final report looking at EEA migration in the UK in September. In the report the MAC found that “taking all the new evidence into account...migrants have no or little impact on the overall employment and unemployment outcomes of the UK-born workforce. The impact may vary across different UK-born groups with more negative effects for the lower-skilled and more positive effects for the higher-skilled”. They further noted that “...overall there is no evidence that migration has had a negative impact on the training of the UK-born workforce. Moreover, there is some evidence to suggest that skilled migrants have a positive impact on the quantity of training available to the UK-born workforce”. However, looking forward they argued that “if the UK decides on its new immigration system in isolation from the negotiations about the future relationship with the EU we do not see compelling reasons to offer a different set of rules to EEA and non-EEA citizens”.

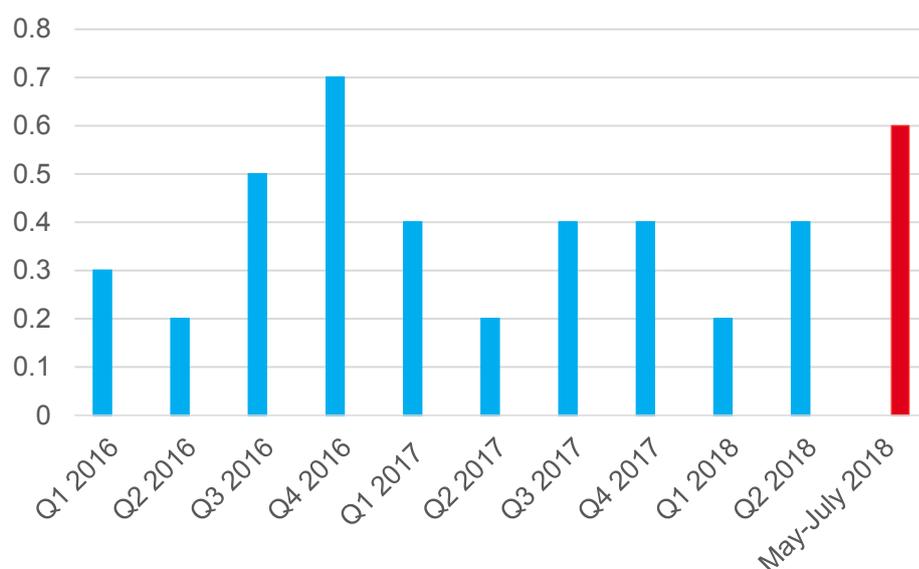
## UK inflation picks up but so does monthly economic growth



Data for August published by the Office for National Statistics (ONS) showed an unexpected uptick in Consumer Price Index (CPI) inflation. CPI inflation in August stood at 2.7% up from 2.5% seen in July; this was a six-month high. Commenting on the broader CPIH measure (which includes owner-occupiers' housing costs) the ONS observed that “rising prices for a range of recreational and cultural goods and services, transport services and clothing produced the largest upward contributions to the change in the rate between July and August 2018”. They added, “partially offsetting downward contributions came from furniture and household goods, and telecommunications”.

In more positive news for the UK, the economy grew by 0.6% in the three months to July according to the ONS's new monthly GDP estimate (see Figure 1). GDP also increased by 0.3% in the month of July alone, although the ONS notes that monthly data is volatile. Commenting on the data for the three months to July the Head of GDP at the ONS Rob Kent-Smith observed that “services grew particularly strongly, with retail sales performing well, boosted by warm weather and the [football] World Cup. The construction sector also bounced back after a weak start to the year. However, production fell back, with manufacturing again slipping a little while energy generation and supply fell due to reduced demand. The dominant service sector again led economic growth in the month of July with engineers, accountants and lawyers all enjoying a busy period, backed up by growth in construction, which hit another record high level”.





**Figure 1: UK GDP growth, Q1 2016 until Q2 2018 and May to July 2018**

Source: ONS

However, looking forward forecasts for the UK economy remain weak with Christine Lagarde observing that the IMF “are projecting growth of about 1½% this year and next, down from about 1¾% in 2016 and 2017. As we noted last year, Brexit-related effects are the driving factor for the slowdown in growth since the referendum”. The British Chamber of Commerce also lowered its latest forecast for the UK which was published in September to 1.1% for 2018 down from a previously forecast 1.3%, with growth for 2019 lowered to 1.3% from a previous forecast of 1.4%, while the forecast for 2020 remains unchanged at 1.6%.

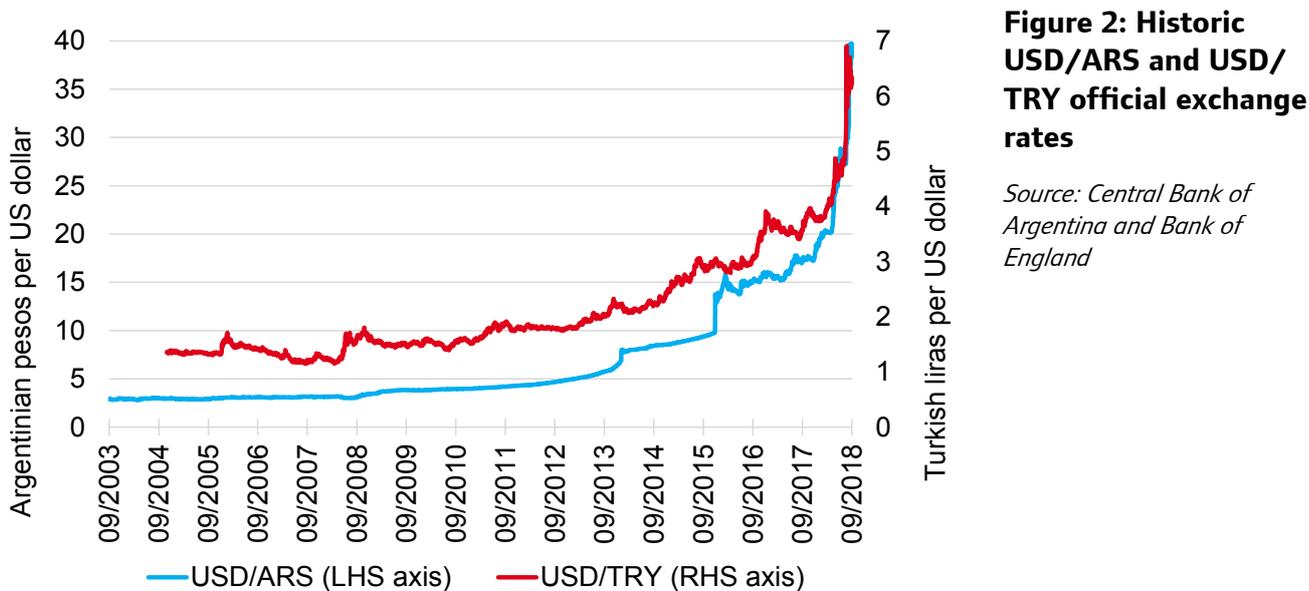
## International trade tensions continue



The ongoing trade war between the US and China further escalated in September with the US imposing the biggest round of tariffs so far. These new tariffs are on \$200 billion of Chinese exports and covers nearly 6,000 items from rice to handbags. The tariffs started at 10% but are due to increase to 25% at the turn of the year if no agreement is reached. In the past China has responded to US tariffs with similar-sized retaliatory tariffs of its own but this time responded with tariff rates of between 5% and 10% on US exports, for a total of \$60 billion. Given the smaller size of China’s imports from the US compared to its exports these latest tariffs mean that most US exports to China are now affected by the trade war. Looking at the international economic situation the OECD has also warned that economic growth prospects for the world economy

have slightly weakened since the start of the year in part due to these “escalating trade tensions”. Still although this ongoing dispute has caused concern for some US farmers, manufacturers and firms producing in China it has so far had a limited impact on the US economy. So, for instance, US average annual earnings growth in August hit 0.4% giving an annual increase of 2.9% the quickest rate since June 2009.

Despite most developed economies performing well the problems in some emerging market economies that have been visible for a while have continued to evolve over the past month. Thus, Argentina has asked the IMF to release a loan of around \$50 billion early to it on the back of an ongoing depreciation of the Argentinian peso (see Figure 2) as investors continue to express doubt on the country’s ability to cover its debts. In response the Argentine central bank has raised interest rates to 60% from 45%. The Argentine economy is however weak with GDP declining by 4.2% in Q2 2018 compared with a year earlier; this was the biggest fall seen in GDP since Q3 2014. Problems also continue in Turkey which raised its interest rates to 24% on 13 September, a 6.25 percentage point rise, as the Turkish central bank tries to limit the fall in the Turkish lira.



## London's ranking as a global financial centre falls to second place

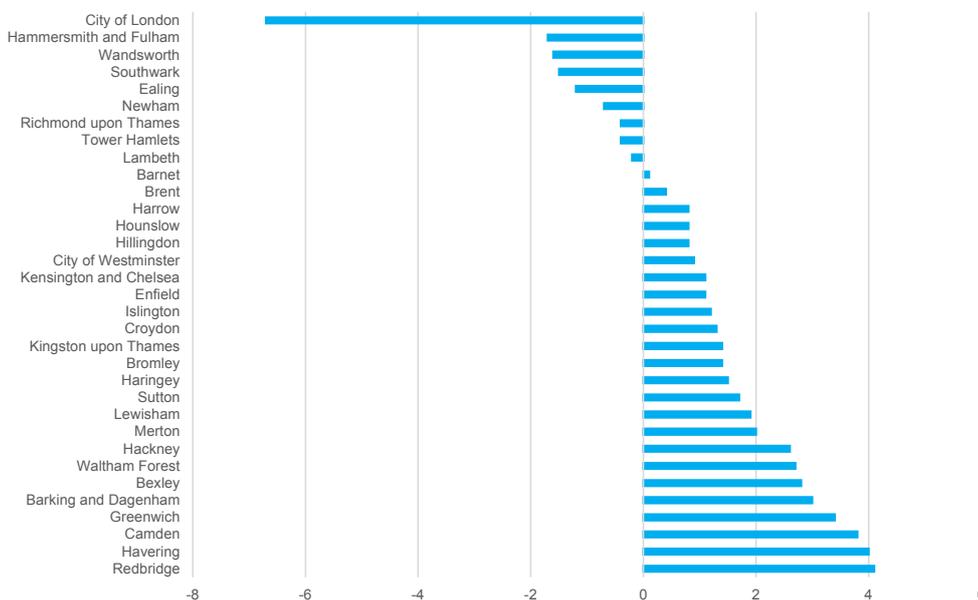


The 24th Global Financial Centres Index from Z/Yen was published in September, which saw London falling marginally behind New York into second place. This was the first time since the 17th report published in March 2015 that London has not held the top position in the index. Hong Kong was in third place in the index, followed by Singapore in 4th, and Shanghai which replaced Tokyo in 5th place.



Having experienced a boom in the first half of the decade, as shown in the indicators section of this publication house prices growth in London have slowed considerably and even turned negative. Looking at this situation in more detail the ONS published some analysis in September examining the data. They found that “recent negative house price growth has primarily been concentrated in inner London but the most recent data suggest it may now also be radiating outwards” (see Figure 3). They noted a few possible explanations for the London decline such as it may reflect pre-existing previous trends with changes in inner-London spreading out to outer London and then to the rest of the country, or more London-specific factors just affecting the

capital. Nevertheless, they further observed that “London seems to have been more affected than the rest of Great Britain by the dip in sales volumes in the second quarter of 2016. This may be because London historically has a relatively large proportion of additional properties that are now subject to a higher rate of Stamp Duty. It may also reflect other factors such as uncertainty following the Brexit referendum result and local factors given the variation by borough”.



**Figure 3: Average growth rate of House Price Index in London boroughs, 12 months to July 2018**

*Source: HM Land Registry, Office for National Statistics*

September also saw the 10-year anniversary of the collapse of Lehman Brothers, a significant event in the late 2000s financial crisis. Since then the London economy has recovered in many ways from the recession triggered by this crisis as shown by the number of workforce jobs in the capital hitting a new record high in the second quarter of 2018. Thus data published by the ONS in September showed that jobs in London stood at 5.92 million in June 2018, up 14,000 on the previous quarter and 88,000 on the same quarter in 2017. This was an increase in jobs on the previous year of 1.5%, higher than the UK increase of 0.4%. However, other measures of economic performance remain sluggish. So, as highlighted in a recent LET supplement, productivity growth in London has been poor since the financial crisis, while wages remain under pressure. Further, a number of indicators of the economic performance of London that had been performing strongly in the middle of the decade have more recently weakened. Therefore, although most indicators of London's economy continue to move in the right direction a number of challenges remain as the capital faces a near future that is subject to ongoing significant uncertainty.

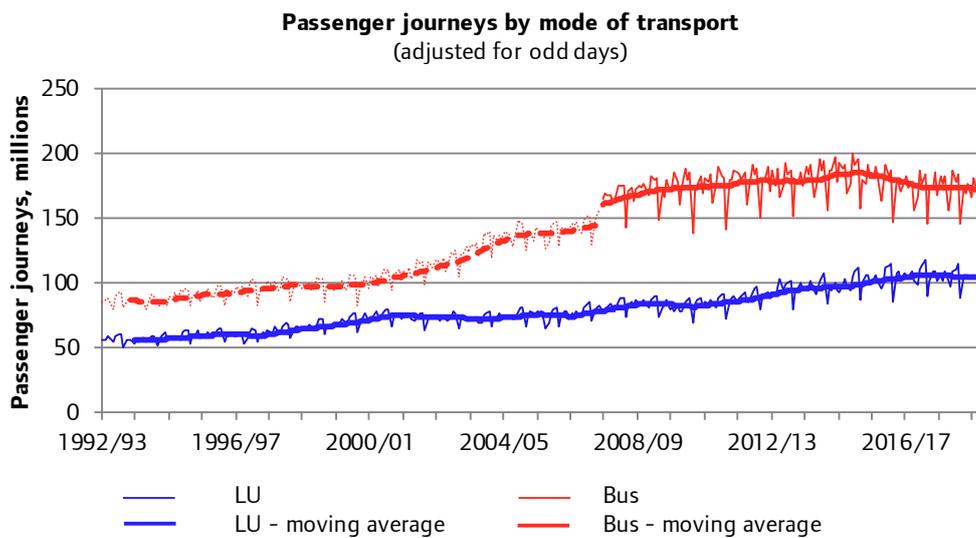
# Economic indicators

## Decline in TfL passenger journeys

- A total of 252.0m passenger journeys were registered between 22 July and 18 August, 35.2m less than the previous period accounting for odd days. While there has been a fall in both bus and Underground journeys, bus journeys account for three quarters of the decline with a fall of 26.5m journeys. 100.3m of the total journeys were Underground journeys and 151.7m were bus journeys.
- The 13-period-moving average in the total number of passenger journeys reduced from 276.3m to 276.0m.
- The methodology used to calculate the number of bus passenger journeys was changed by TfL on 1 April 2007. For a detailed explanation, please see LET issue 58 (June 2007).

Source: Transport for London

Latest release: September 2018, Next release: October 2018

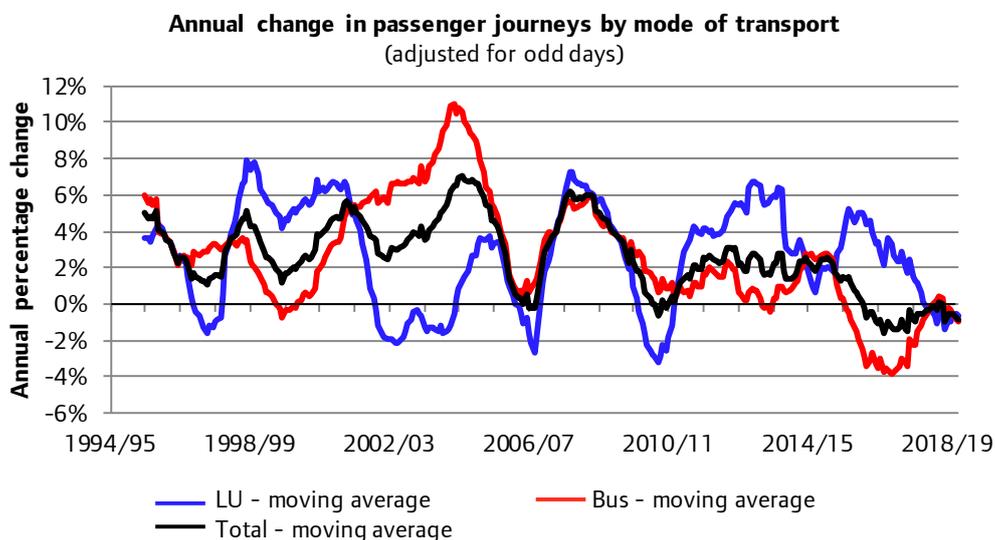


## The annual growth rate in passenger journeys remains negative

- The moving average annual growth rate in the total number of passenger journeys decreased slightly from -0.7% to -0.8%.
- The moving average annual growth rate of bus journeys decreased from -1.8% to -2.2%.
- The moving average of Underground passenger journeys remained unchanged at -0.6%.

Source: Transport for London

Latest release: September 2018, Next release: October 2018

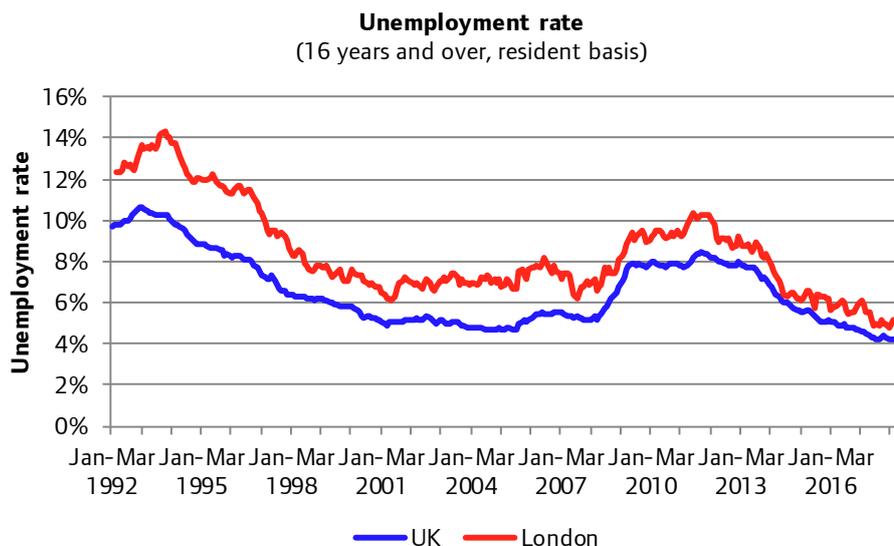


## London and UK unemployment at historic low

- 235,000 residents over 16-year-old were unemployed in London for the three-month period May-July 2018.
- The unemployment rate in London reached a historic low of 4.7% in that period, down from 4.9% in the previous period of April-June 2018.
- Meanwhile, the UK's unemployment rate remained at a low of 4.0%. Unemployment hasn't been this low in London or the UK since before this data set began in 1992.

Source: ONS Labour Force Survey

Latest release: September 2018, Next release: October 2018

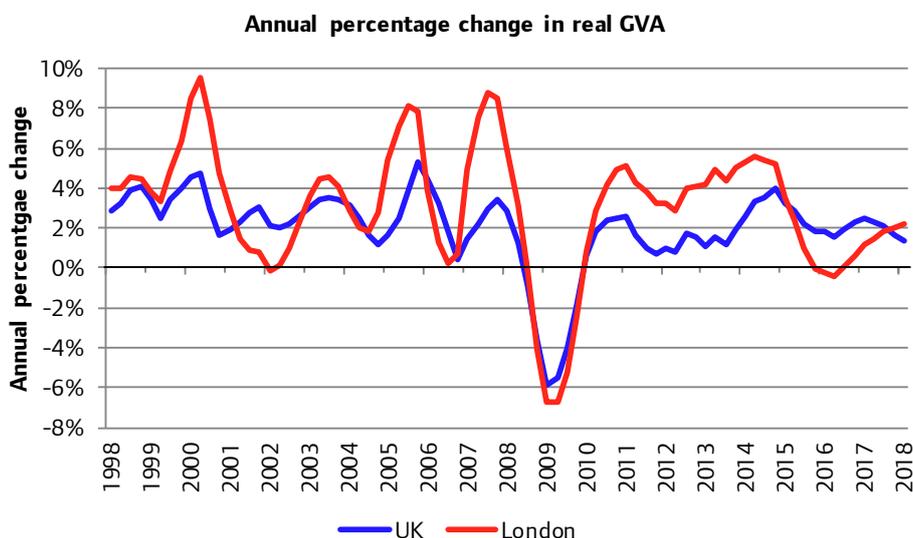


## London's annual output growth reached 2.2% in Q1 2018

- London's annual GVA growth was 2.2% during the first quarter of 2018, the highest rate since Q2 2015 and the seventh consecutive increase of the rate.
- In the UK, the downward trend from Q1 2017 continues. Output growth was 1.3% annually in Q1 2018, 0.3 percentage points lower than the previous quarter, representing the weakest expansion in more than four years.
- From LET Issue 165 (May 2016), GLA Economics now reports our own GVA estimates for London and ONS data for the UK.

Source: ONS and GLA Economics

Latest release: July 2018, Next release: October 2018

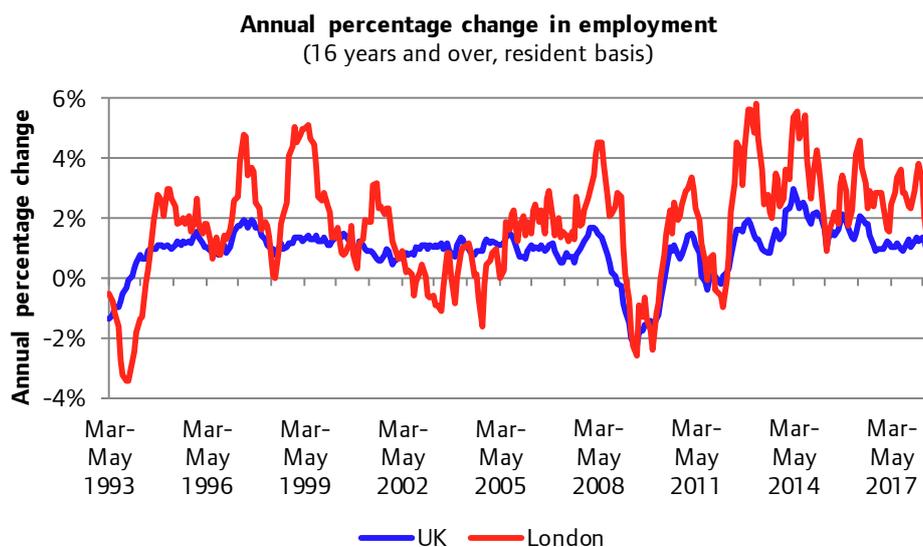


### Annual growth in employment in London continues but at a slower pace

- More than 4.73 million residents over 16 years old were employed in London during the three-month period May-July 2018.
- The rate of annual employment growth for the capital fell to 1.4% for this period, 1.9 percentage points slower than registered for the previous quarter.
- In the May-July 2018 period, the UK employment rate grew annually at a rate of 0.8%, 0.6 percentage points down from the previous quarter.

Source: ONS Labour Force Survey

Latest release: September 2018, Next release: October 2018

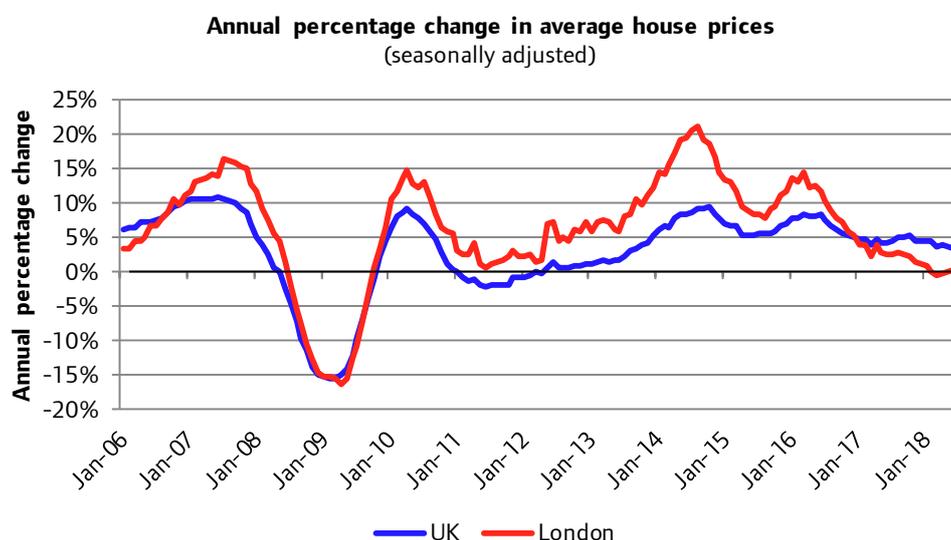


### Average house prices in London at lowest level since January 2017

- In July 2018, the average house price in London fell to £476,254, while for the UK the average increased slightly to £227,147.
- The annual growth rate in average house prices in London was -0.7% in July, down from 0.2% in June.
- For the UK, on an annual basis, house prices grew 0.2 percentage points slower in July (3.1% year-on-year) compared with June.

Source: Land Registry and ONS

Latest release: September 2018, Next release: October 2018

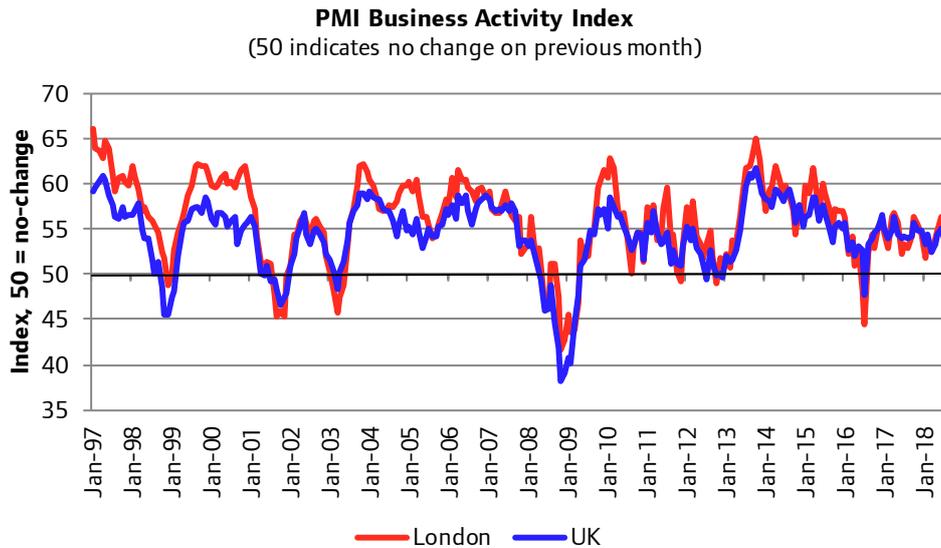


### London business activity improves in August

- The Purchasing Managers' Index (PMI) survey shows the monthly business trends at private sector firms. Index readings above 50.0 suggest a month-on-month increase in that variable, while readings below indicate a decrease.
- Business activity growth at London private firms was 54.8 in August, up from 53.1 in July.
- The UK index also increased from 53.5 in July to 54.2 in August.

Source: IHS Markit

Latest release: September 2018, Next release: October 2018

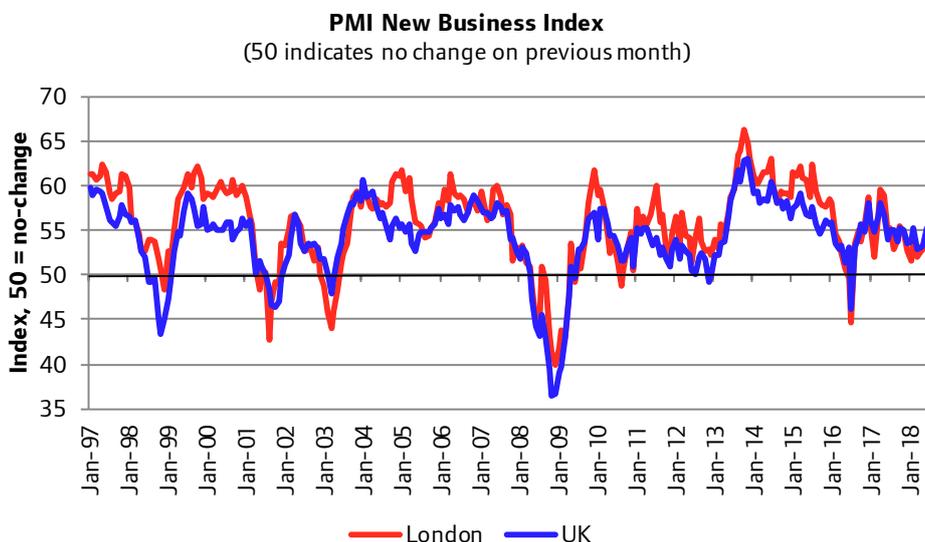


### Growth in new business remains solid in London

- The PMI New Business Index was 54.3 in London in August, up slightly from 54.2 in July.
- Meanwhile, UK firms reported an index of 53.7 in August, also up slightly compared to the index score of 53.3 seen in July.
- An index reading above 50.0 indicates an increase in new orders from the previous month.

Source: IHS Markit

Latest release: September 2018, Next release: October 2018

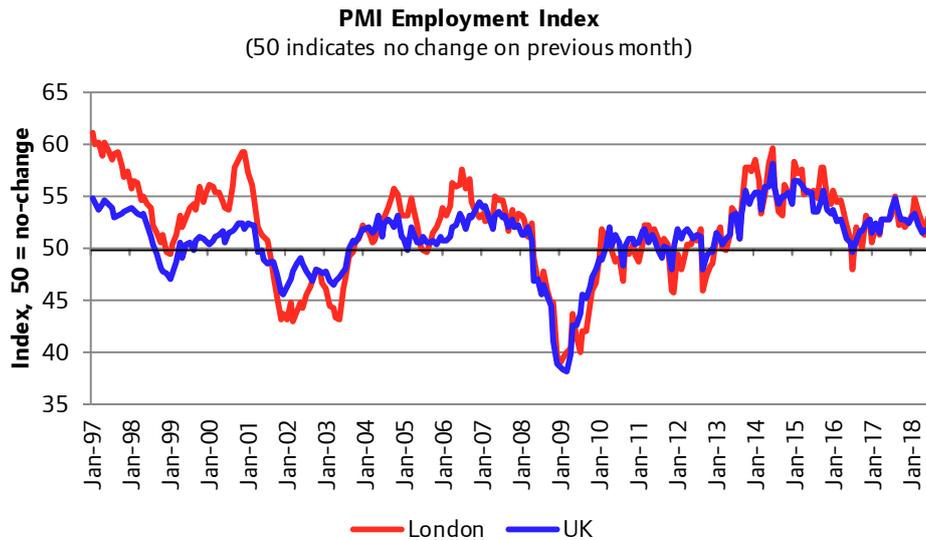


### Growth in employment for slight majority of private sector firms in London

- The PMI Employment Index shows the monthly change in employment at private sector firms. Readings above 50.0 suggests an increase, whereas a reading below indicates a decrease in employment from the previous month.
- The Employment Index for London was 51.2 in August, up from 50.6 in July. While an increase, this is the joint second lowest index score recorded for London since January 2017.
- Employment levels also increased across the UK in August (52.1) and at a slightly higher rate than the previous month (51.0).

Source: IHS Markit

Latest release: September 2018, Next release: October 2018

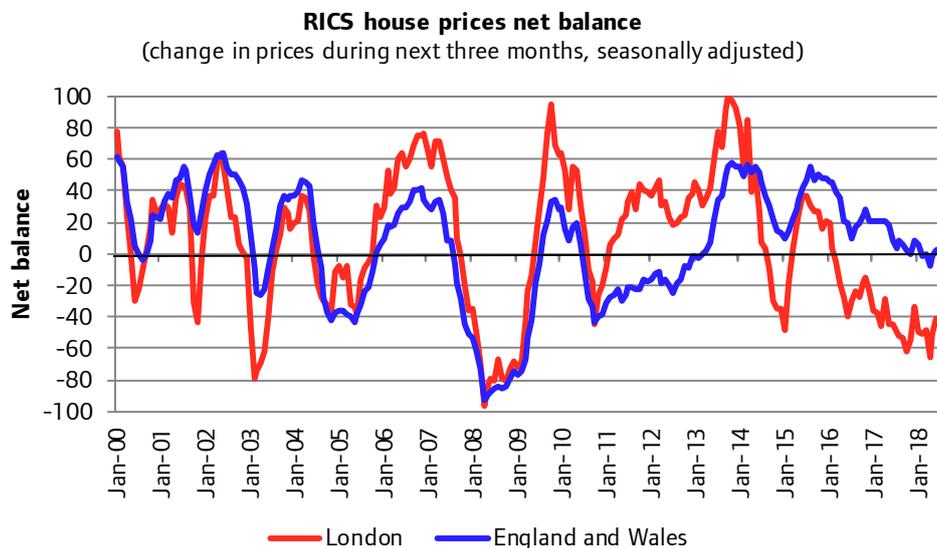


### Most property surveyors report continued contraction in London house prices

- In the three months to August 2018, the net balance of property surveyors fell from -42 to -52. The index has now been negative since the three-month period to March 2016.
- The RICS house prices net balance index for England and Wales reduced from 4 to 2 for the same period.
- The net balance index measures the proportion of respondents reporting a rise in prices minus those reporting a decline.

Source: Royal Institution of Chartered Surveyors

Latest release: September 2018, Next release: October 2018

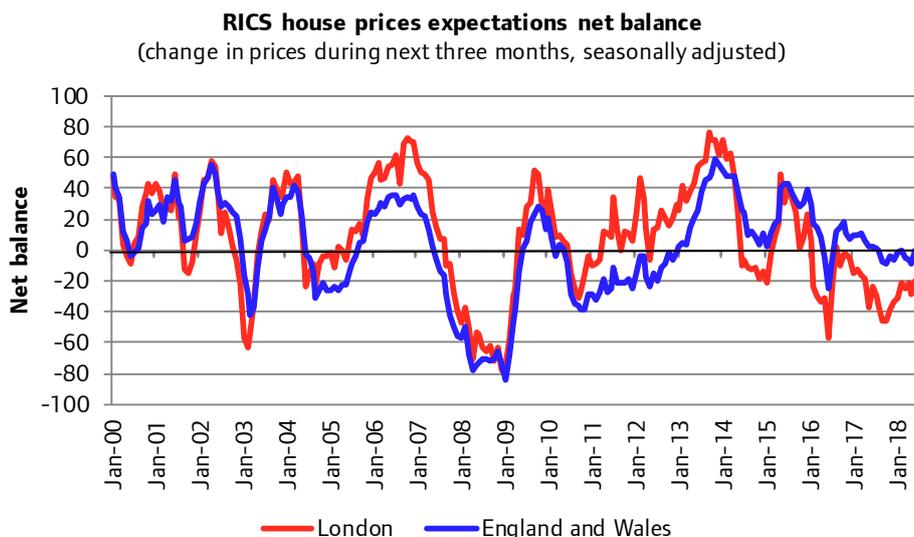


## House prices expectations in London fall further in August

- Most surveyors continued to have negative expectations for the next three months for house prices in London. The RICS index was -39 in August, down from -33 in July.
- London remains the region with the most negative expectations for house prices.
- Sentiment in England and Wales was also negative in August (-7) down from -5 in July.

Source: Royal Institution of Chartered Surveyors

Latest release: September 2018, Next release: October 2018

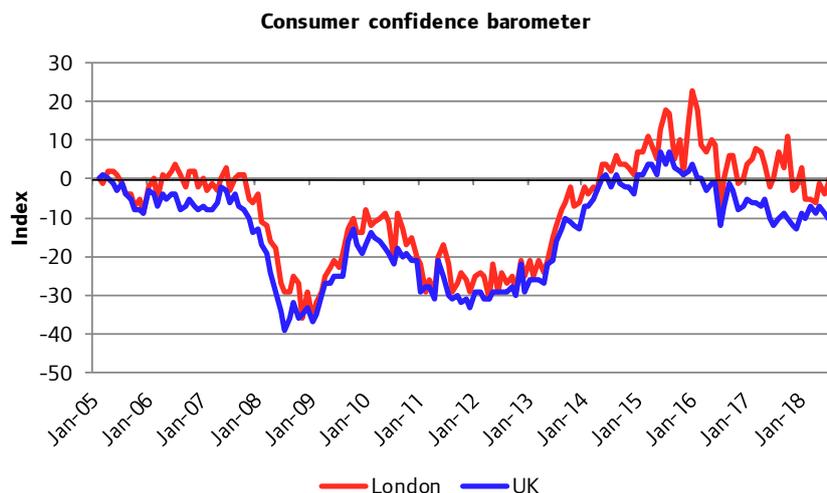


## Consumer confidence in London positive in August

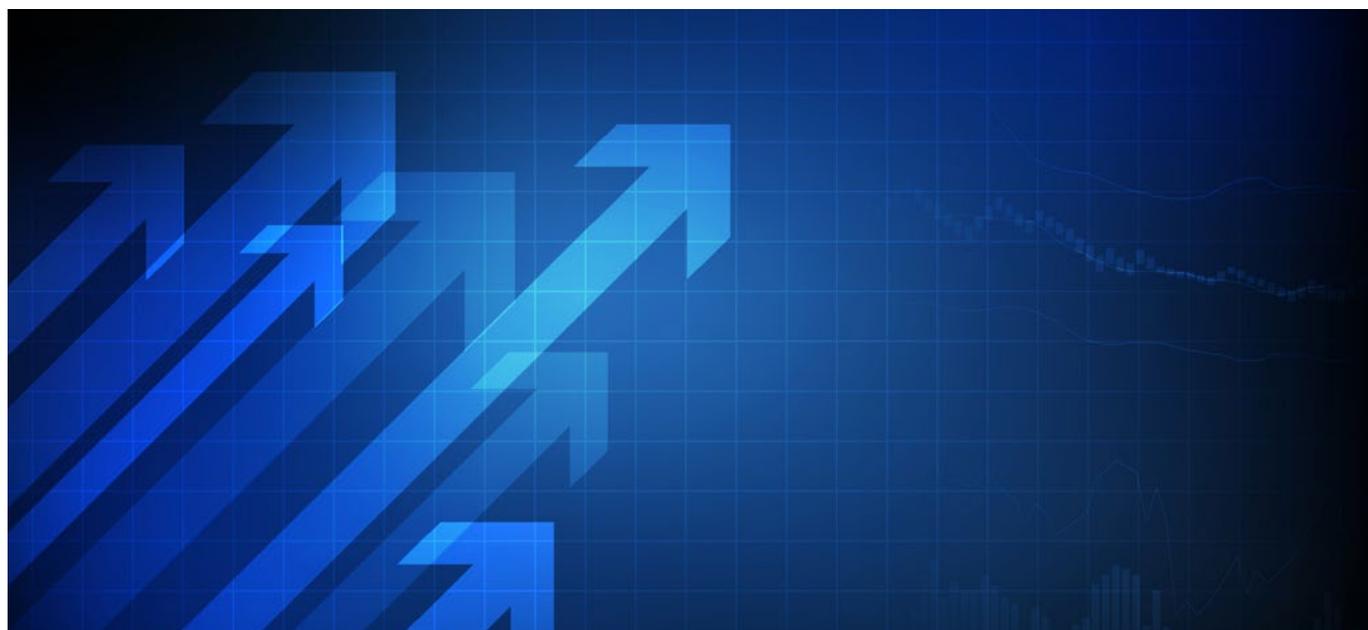
- The GfK index of consumer confidence reflects people's views on their financial position and the general economy over the past year and in the next 12 months. A score above zero suggests positive opinions; a score below zero indicates negative sentiment.
- The consumer confidence index in London was 5 in August, up from -1 in July. This represents the first positive index score for London since October 2017.
- Sentiment remained negative for the UK in August (-7) but improved compared to July (-10). The UK has not shown a positive index score since January 2016.

Source: GfK NOP on behalf of the European Commission

Latest release: September 2018, Next release: October 2018



# Performance of past employment projections



By **Nye Cominetti**, Economist

GLA Economics has produced long-run projections of London's employment since 2002<sup>1</sup>. Their main purpose is to inform planning to provide capacity to accommodate the longer-term needs of the London economy. This supplement is based on a forthcoming publication that looks at how our past projections have performed and how this compares to projections from other respected organisations. This exercise was previously carried out in 2014<sup>2</sup>. Our more recent work will update that analysis.

## Our projections

Our projections are trend-based; we use historic employment and output (currently over four decades) with an assumption on future output growth. The projections are designed to provide a guide to the long-run (approximately two decades) path of employment based on the historic data available at the time of construction. The projections are not designed to act as forecasts of short-run employment as it fluctuates around its trend, an important point to bear in mind when evaluating their performance. We publish short-term forecasts separately in our biannual London's Economic Outlook publication<sup>3</sup>.

In terms of assessing the performance of projections, it is desirable that projections are accurate and unbiased, and that there is as little variation between projection iterations as possible. This is the basis on which we have assessed our projections. We will start with accuracy.

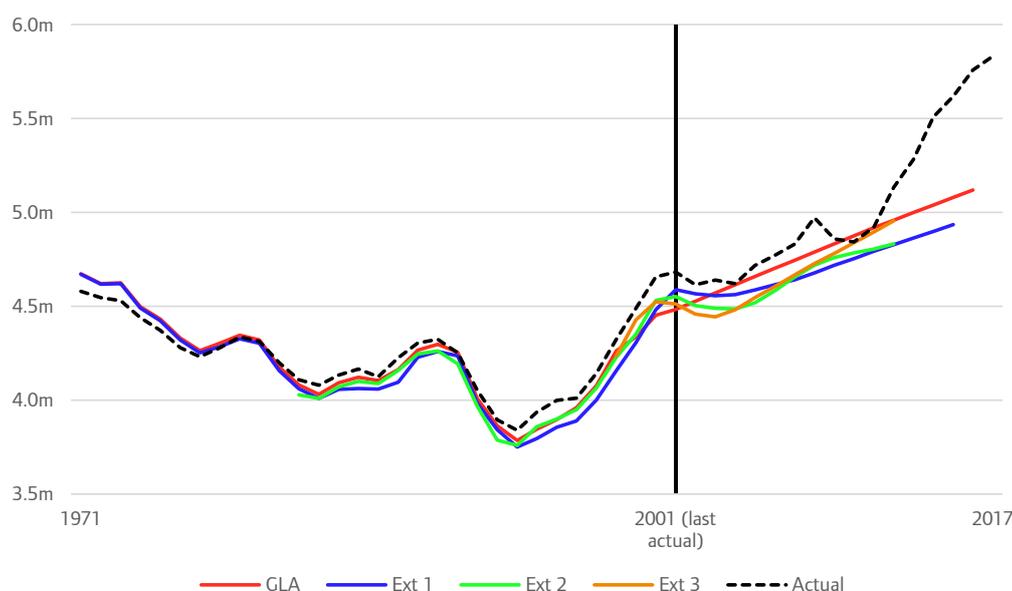
<sup>1</sup> Projections from 2009 and later are available on the [London Datastore](#)

<sup>2</sup> GLA (2014) [Performance of GLA Economics' employment projections](#)

<sup>3</sup> These are available on the [GLA Economics Publications page](#)

## Accuracy

We can assess the whole of our oldest projection, from 2002, since it only extended to 2016. That projection appears to have performed well until the recent period. It suggested there would be 5.12 million jobs in London by 2016. In fact, there were 5.76 million jobs, so the projection was 11% too low at that point. However, the GLA's 2002 estimates compare relatively favourably to projections from other respected organisations. For example, the GLA's 2002 projections were 10% below the actual in 2015, whereas the other forecaster with a 2002 projection figure for 2015 was 12% out. Figure A1 shows the GLA's 2002 projection (in red) alongside the actual series (in black) and the projections of three other respected forecasters. It shows the GLA's estimates tracking the actual series better than the external projections.



**Figure A1: 2002 employment projections of GLA and external forecasters, and outturn data, 1971-2017**

*Source: Actual data is from ONS Workforce Jobs series (downloaded May 2018). Forecasters' data are from 2002 employment projections. The external forecasts were published in Spring 2003, the closest data to 2002 that was available. It is not clear why the back series differ. The reason why the GLA's back series differs from the actual is that the actual series is subject to revisions.*

What about our other rounds of projections? Table A1 shows the average percentage error (in absolute terms) for each projection round and for all forecasters. For each round, the 'assessment period' is all years from the projection up to 2017 for which all external forecasters provide a projection. So, for 2002, the assessment only extends to 2012, because two of the external forecasters do not project further than this. The best and worst-performing projections from each round (on this measure) are highlighted in green and red, respectively. We find that the GLA performs best in three out of nine projection rounds (2002, 2009 and 2011). We perform less well in four out of nine rounds (2007, 2013, 2015 and 2016). However, with the exception of 2007, these are all recent projections. As noted already, our methodology has a long-term focus and is not designed to be accurate in the short-term (e.g. in terms of predicting short-term fluctuations). Thus, its performance against only a few years of data should be treated with caution.

Projection round	Period assessed	GLA	Ext 1	Ext 2	Ext 3
2002	2002 to 2012	1.5%	3.0%	3.4%	2.9%
2005	2005 to 2014	4.5%	6.5%	4.6%	3.8%
2007	2007 to 2017	6.5%	5.8%	5.0%	3.9%
2009	2009 to 2017	6.7%	10.2%	9.4%	8.7%
2011	2011 to 2017	5.8%	7.6%	8.2%	6.1%
2013	2013 to 2017	4.9%	4.3%	3.0%	3.3%
2015	2015 to 2017	1.3%	1.1%	0.4%	0.8%
2016	2016 to 2017	1.5%	1.0%	0.6%	1.1%
2017	2017	0.8%	1.3%	0.2%	0.5%

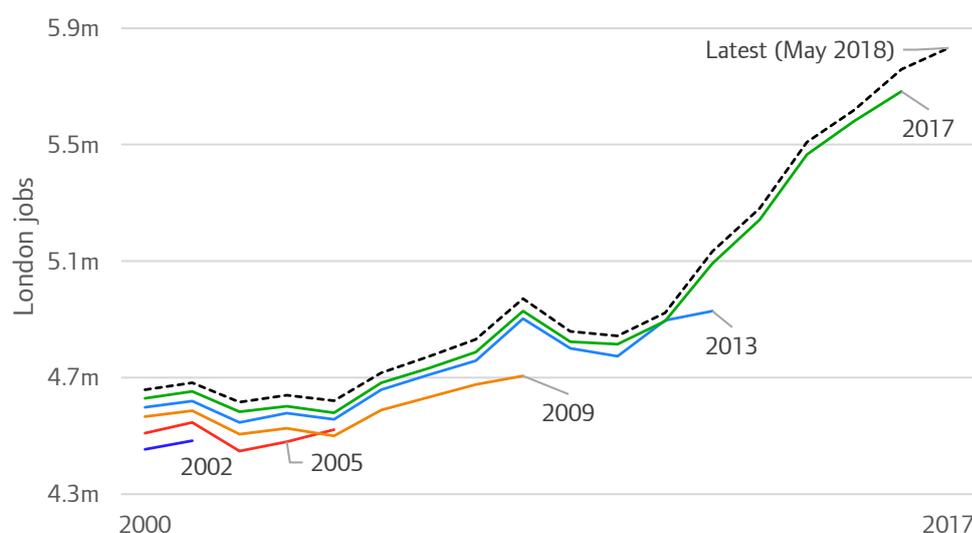
**Table A1: Average absolute percentage error of employment projections – GLA and external**

*The best and worst performing projections from each year are highlighted in green and red, respectively.*

## Bias

In terms of bias, we find that all forecasters under-estimated jobs growth in almost every projection round. This suggests that there may be something wrong with the methodologies all forecasters are using. Why after under-estimating once or twice were projections not revised up? There are two main reasons.

First, is the fact that the historic data series is subject to revision. In the period we are examining here, all data revisions made by the Office for National Statistics have been upwards, which is one reason why forecasters have consistently under-estimated jobs growth. That is, on many occasions, the GLA was making projections based on data which under-estimated past jobs growth. These upwards revisions can be seen in Figure A2. For example, the data available now suggests there were 200,000 more jobs in 2000 than was thought when the 2002 projections were made.



**Figure A2: Historic series available at various projection rounds showing upwards revisions**

*Source: ONS WFI series, and historical data in GLA projections*

Second, and more significant, in recent years, is the extremely strong growth in employment in the past few years – much stronger than would have been expected given the level of output growth. This so-called ‘productivity puzzle’ has been perplexing many economists and forecasters, raising questions as to whether the more recent trend is reflective of a new trend/structural change or a temporary deviation from the long-term historic relationship between output and employment. This requires a judgement about how much weight to place on recent data when constructing employment estimates, especially since productivity has previously diverted from its trend and our projections are designed to be a guide to the long-term path of the economy (not to anticipate short term changes). By 2015, however, above-trend jobs growth had lasted for five years, and we and other forecasters did start revising projections upwards. This is an area that GLA Economics, alongside others, continue to monitor closely.

## Consistency between projection rounds

As well as accuracy, another desirable feature of projections is that there is a reasonable degree of consistency between projection rounds. Table A2 shows the key statistics for the GLA’s nine projections since 2002 – the average annual jobs growth, and the compound annual growth rate (CAGR). Projections made in the aftermath of the recession have a lower CAGR than earlier and later projections. In 2011, when jobs numbers were still heading downward, the projected CAGR was 0.53%, whereas all other rounds the CAGR has been above 0.6%.

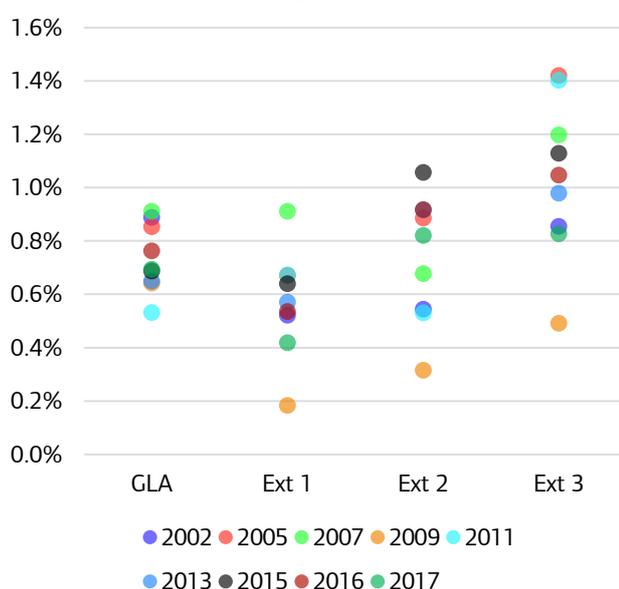
	Projection round								
	2002	2005	2007	2009	2011	2013	2015	2016	2017
Year of last available actual	2001	2004	2006	2008	2010	2012	2014	2015	2016
Year projection extends to	2016	2026	2026	2031	2036	2036	2036	2041	2050
Number of years projected	15	22	20	23	26	24	22	26	34
Jobs in last available actual	4,484k	4,521k	4,587k	4,706k	4,837k	4,928k	5,520k	5,538k	5,683k
Jobs at end of projection	5,120k	5,450k	5,499k	5,452k	5,552k	5,757k	6,418k	6,748k	7,189k
Average annual growth*	42.4k	42.2k	45.6k	32.4k	27.5k	34.5k	40.8k	46.5k	44.3k
CAGR*	0.89%	0.85%	0.91%	0.64%	0.53%	0.65%	0.69%	0.76%	0.69%

**Table A2: Comparison data from nine GLA employment projections, from 2002 to 2017**

*\* Over period from last available actual to end of projection*

The difference between the highest and lowest CAGR in the GLA's projections is 0.38 percentage points. The three external forecasters all have higher ranges, with 0.73 percentage points for External 1, 0.74 percentage points for External 2, and 0.93 percentage points for External 3. This suggests that the GLA's projections offer a greater degree of consistency than the three external forecasters. This is shown in Figure A3, which plots the CAGR of each projection round, grouped by forecaster.

This figure also shows that the external forecasters are more responsive to short-term trends than the GLA. Whereas the external forecasters reduced their expected long-term growth rate in the wake of the recession significantly (see the 2009 CAGR, in orange), the GLA did not.



**Figure A3: Compound annual growth rate of each projection for GLA and three external forecasters**

## Conclusions

This work has highlighted some of the difficulties in producing long-term employment projections, which include the uncertainties around the relationship between employment, productivity and output, which form part of our projections methodology, and the problems caused by revisions to the back series. However, despite these, examining the performance of our past projections gives us confidence in our methodology. Our projections perform reasonably well, especially in the longer-term, and when compared to external forecasters.

# Our latest publications

We publish regularly on the state of London's economy, providing the latest economic data for London and interpret how this may affect policy. This includes analysis of recent developments in London's economy and forecasts for the next couple of years.

We provide analysis on sectors of the economy including tourism, retail, housing, health, science, technology and more.

We analyse recent developments in London's labour market, by sector and borough.

View all the GLA Economics publications on our [website](#).



## Skills strategy for Londoners, Evidence base

This skills strategy evidence base supports the Mayor's skills strategy, 'Skills for Londoners'. It covers the demand for and supply of skills, inequalities in skills, employer training, and the training and education system.



- Nationally, spending on adult education has fallen since 2010 which is reflected in lower participation. Between 2012/13 and 2016/17 the number of adult Londoners (age 19+) participating in classroom-based further education fell 41%, although the number of adult apprenticeships increased by 9% in this period.

[Download](#) the full publication.



## Wider South East experimental labour market projections

These projections are to provide a shared understanding of the technical evidence to inform planning across the Wider South East (East of England, and the South East of England).



- The central projection for the East of England estimates that jobs will grow from 2016 at an annual average rate of 0.92% a year, equivalent to 32,000 jobs, to reach 3.912 million in 2041.
- The central projection for the South East of England estimates that jobs will grow from 2016 at an annual average rate of 0.98% a year, equivalent to 54,000 jobs, to reach 6.194 million in 2041.

[Download](#) the full publication.



## London's Economic Outlook

Our latest London forecast published in May 2018 suggests that:



- London's Gross Value Added (GVA) growth rate is forecast to be 1.6% in 2018. The growth rate is expected to rise slightly to 1.9% in 2019, before reaching 2.2% in 2020.
- London is forecast to see increases in the number of workforce jobs in 2018, 2019 and 2020.
- London's household income and spending are both forecast to increase over the next three years, albeit at a relatively slow rate.

[Download](#) the full publication.

City Hall  
The Queen's Walk  
London SE1 2AA

**Email** [glaeconomics@london.gov.uk](mailto:glaeconomics@london.gov.uk)

**Internet** [www.london.gov.uk](http://www.london.gov.uk)

© Greater London Authority  
September 2018

ISSN 1740-9136 (print)

ISSN 1740-9195 (online)

ISSN 1740-9144 (email)

*London's Economy Today* is published towards the end of every month. It provides an overview of the current state of the London economy, and a selection of the most up-to-date data available. It tracks cyclical economic conditions to ensure they are not moving outside the parameters of the underlying assumptions of the GLA group.

## Images

© Shutterstock

## Subscribe

Subscribe online at <https://www.london.gov.uk/what-we-do/research-and-analysis/join-our-mailing-list-research-and-analysis>

## Disclaimer

GLA Economics uses a wide range of information and data sourced from third party suppliers within its analysis and reports. GLA Economics cannot be held responsible for the accuracy or timeliness of this information and data.

GLA Economics, Transport for London and the Greater London Authority will not be liable for any losses suffered or liabilities incurred by a party as a result of that party relying in any way on the information contained in this publication.

## About GLA Economics

GLA Economics provides expert advice and analysis on London's economy and the economic issues facing the capital. Data and analysis from GLA Economics provide a sound basis for the policy and investment decisions facing the Mayor of London and the GLA group. The unit was set up in May 2002.